CONFIGURABLE DIGITAL LOUDNESS COMPENSATION SYSTEM AND METHOD

ABSTRACT OF THE DISCLOSURE

An audio loudness compensation system includes a level sensor receiving an audio input signal and operable to estimate a level of the audio input signal over a first predetermined time period, and a level mapper receiving the estimated level and operable to map the estimated level to a raw audio gain in response to a slope setting and an offset setting. The system further includes an attack and decay filter receiving the raw audio gain and operable to smooth out increasing and decreasing changes in the raw audio gain in response to a second and, possibly a third predetermined time period, and a compensation filter receiving the smoothed raw audio gain and operable to modify the audio input signal in response to the smoothed raw audio gain, a center frequency setting and a bandwidth setting, and generate a loudness compensated audio output signal.